

What is claimed is:

1. A vibration generator system for vibrating a movable body according to a drive signal, wherein accumulation signals for excitation of the movable body to vibrations are included in the drive signal at intervals, and when the accumulation signals are given, the movable body perform motions to be excited, to damp thereafter, and to repeat such excitation and damping, and that changes in an envelope, which connects peaks of amplitude of the movable body when the vibrations are excited and damped, are obtained as vibrations of a lower frequency than a frequency of the vibrations.

2. The vibration generator system according to claim 1, wherein the accumulation signals include excitation signals intermittently giving to the movable body a driving force in the same direction.

3. The vibration generator system according to claim 2, wherein the accumulation signals include reverse excitation signals provided between the excitation signals to give a driving force in a reverse direction to that of the driving force by the excitation signals.

4. The vibration generator system according to claim 1, wherein the drive signal includes damping signals for damping of the movable body, which has been excited with the accumulation signals, after the excitation.

5. The vibration generator system according to claim 4, wherein the damping signals include inhibition signals giving to the vibrating movable body a driving force in a reverse direction

to a move direction of the movable body.

6. The vibration generator system according to claim 5,  
wherein the damping signals include reverse inhibition signals  
provided between the inhibition signals to give a driving force  
5 in a reverse direction to that of the driving force by the  
inhibition signals.

7. The vibration generator system according to claim 2,  
wherein the control means can produce intervals of the  
accumulation signals in different patterns and can generate  
10 accumulation signals having different numbers of the excitation  
signals and different patterns.

8. The vibration generator system according to claim 2,  
wherein position detection means is provided to detect that the  
movable body has reached a predetermined position of detection  
15 during vibration and cycles of the excitation signals are  
determined on the basis of detection signals from the position  
detection means.

9. The vibration generator system according to claim 5,  
wherein position detection means is provided to detect that the  
20 movable body has reached a predetermined position of detection  
during vibration and cycles of the inhibition signals are  
determined on the basis of detection signals from the position  
detection means.

10. The vibration generator system according to claim 1,  
25 wherein the movable body is supported on a support to be able to  
reciprocate in a range of a predetermined stroke, and further  
comprising energizing means for energizing the movable body

toward a middle point of the stroke, magnetic drive means comprising a magnet provided on one of the movable body and the support and a coil provided on the other of the movable body and the support and for giving to the movable body a driving force  
5 in a direction along the stroke, and control means for giving a drive signal to the coil to cause the movable body to generate vibrations of natural frequency.

11. The vibration generator system according to claim 9, wherein the movable body is movable along an axis, and the  
10 energizing means comprises a coil spring for biasing the movable body in different directions from both sides in the stroke direction.

12. The vibration generator system according to claim 10, wherein the support comprises a cylindrical casing and the axis  
15 is positioned on a central axis of the cylindrical casing, and wherein one of the magnet and the coil is provided on the support and the other of the magnet and the coil is provided on the cylindrical casing.